

I. AMENDMENTS TO THE DRAWINGS

Kindly replace page 6/7 containing old Figure 6 with new page 6/7 containing new Figure 6, enclosed herewith.

Attachment: The Replacement Sheet containing the amended drawing is found in the Appendix following page 17 of this paper. A sheet showing the changes made to Figure 6 is also attached.

IV. REMARKS/ARGUMENTS

A. Amendment to the Drawings

On page 2 of the Office Action, the Examiner indicates that the drawings do not comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the text: 300, 302, 304, 314, 316, 308.

In response to the Examiner's objection, the Applicant respectfully submits that Figure 6 has been amended in order to include reference numerals 302 and 308. With respect to reference numerals 300, 304, 314 and 316, the Applicant respectfully submits that these reference numerals were present in Figure 6 as filed. The Applicant further submits that the reference numerals of the third embodiment (p18-19) do match with those shown on Figure 6.

B. Amendments to the Specification

The Applicant respectfully submits that upon review of the specification, a minor typographical error was detected in the paragraph beginning on line 7 of page 7. Accordingly, this paragraph has been amended to correct the minor typographical error.

The specification is now believed to be error free.

C. Amendments to the Claims

The application now contains 27 claims.

Claims 1, 28 and 29 have been amended in order to better define the subject matter being claimed.

Claims 2-23 and 30 remain the same.

Claims 24-27 have been cancelled from the present application without prejudice.

New claim 31 has been added to the present application to better define the subject matter for which protection is sought. Support for new claim 31 can be found in the specification as originally filed. No new matter has been added under the current amendment.

D. Statements of Rejection and Reply

i) Claim Rejections under 35 USC §112

In the Office Action, the Examiner has rejected claims 1-30 under 35 USC §112 for being indefinite and failing to particularly point out and distinctly claim the subject matter the applicant regards as the invention. More specifically, the Examiner indicates that claims 1, 24, 28 and 29 are incomplete since the interior chamber must be coated with conductive material in order to operate as a comb-line filter.

Firstly, the Applicant respectfully submits that claim 24 has been cancelled from the present application, thereby rendering the Examiner's rejection moot.

Secondly, the Applicant respectfully submits that claims 1 and 28 have been amended to indicate that at least a portion of the first portion includes a conductive layer.

Finally, with respect to claim 29, the Applicant respectfully submits that this claim does not specify that the first material is made of a dielectric material. As such, it is possible that this first material is made of a conductive material that would not require a conductive coating. In light of this, it was not deemed necessary to amend claim 29 in order to specify that the first material is covered with a conductive coating.

In light of the above, the claims currently on file are believed to be in accordance with 35 USC §112 since they clearly and distinctly define the subject matter for which protection is sought.

ii) Claim Rejections under 35 USC §102(b)

In the Office Action, the Examiner has rejected claims 28-30 under 35 USC §102(e) as being anticipated by U.S. Patent 5,329,687 (hereafter referred to as Scott et al.).

For the reasons presented below, the Applicant respectfully submits that independent claims 28, 29 and 30, as amended, are in allowable form over Scott et al.

Claim 28

The Examiner's attention is respectfully directed towards the following limitation of amended claim 28.

A comb-line filter comprising:

- a) a housing comprising:
 - i. **a first portion made of a dielectric material of a first density**, at least a portion of said dielectric material coated with a conductive layer; and
 - ii. **a second portion made of a metal material of a second density**, said first density being less than said second density, said first portion and said second portion adapted for being attached together so as to define an interior chamber for conducting signals, **said second portion having a smaller surface area than said first portion**;
- b) **at least one resonator attached to said second portion**, and adapted for extending within the interior chamber when said first portion and said second portion are attached.

The Applicant respectfully submits that the reference cited by the Examiner does not disclose, teach or suggest the combination of the above-emphasized limitations of amended claim 28. More specifically, Scott et al. does not disclose a housing having "a first portion made of a dielectric material of a first density", "a second portion made of a metal material of a second density, said first density being less than said second density...said second portion having a smaller surface area than said first portion" and **"at least one resonator attached to said second portion"**.

Nowhere does Scott et al. describe attaching the resonators to the portion of the housing having the smaller surface area. As such, Scott et al. does not satisfy each of the above-emphasized limitations of independent claim 28.

As per §2131 of the MPEP, in order “to anticipate a claim, the reference must teach every element of the claim”. Since Scott et al. does not teach every limitation of independent claim 28, Scott et al. does not support a rejection based on anticipation. As such, for the reasons presented above, the Examiner is respectfully requested to withdraw his rejection of independent claim 28.

If the Examiner finds the Applicant’s arguments unconvincing, and continues to hold that Scott et al. anticipates the invention of claim 28, the Examiner is respectfully invited to indicate where in the Scott et al. reference each of the limitations of independent claim 28 is believed to be taught.

Claims 29-30

The Examiner’s attention is respectfully directed towards the following limitation of amended claim 29.

A comb-line filter comprising:

- a) a housing comprising:
 - i. **a first portion made of a first material; and**
 - ii. **a second portion made of a second material**, said second portion being provided with a conductive layer, said conductive layer being more conductive than said first material of said first portion, said first portion and said second portion adapted for being attached together so as to define an interior chamber for conducting signals, **said second portion having a smaller surface area than said first portion;**
- b) **at least one resonator attached to said second portion**, and adapted for extending within the interior chamber when said first portion and said second portion are attached.

The Applicant respectfully submits that the reference cited by the Examiner does not disclose, teach or suggest the combination of the above-emphasized limitations of amended claim 29. More specifically, Scott et al. does not disclose a housing having “a

first portion made of a first material”, “a second portion made of a second material...said second portion having a smaller surface area than said first portion” and **“at least one resonator attached to said second portion”**.

As indicated above with respect to independent claim 28, Scott et al. does not teach attaching the resonators to the portion of the housing having the smaller surface area. As such, Scott et al. does not satisfy each of the above-emphasized limitations of independent claim 29. Accordingly, this claim is believed to be in condition for allowance over the reference cited by the Examiner, and the Examiner is respectfully requested to withdraw his rejection of independent claim 29.

Claim 30 depends from independent claim 29, and as such incorporates by reference all the claim limitations contained therein, including those shown above to be absent from Scott et al. As such, the Applicant respectfully submits that claim 30 is also in condition for allowance as being dependent upon an allowable base claim.

iii) Claim Rejections under 35 USC §103(e)

In the Office Action, the Examiner has rejected claims 1-27 under 35 USC §103(a) as being unpatentable over U.S. Patent 4,216,448 (hereafter referred to as Kasuga et al.) in view of Scott et al.

For the reasons presented below, the Applicant respectfully traverses the Examiner's rejection, and submits that claims 1- 27 are in allowable form.

Claim 1

The Examiner's attention is respectfully directed towards the following limitation of independent claim 1.

A comb-line filter comprising:

a) a housing comprising:

- i. **a first portion made of a dielectric material**, at least a portion of said first portion being coated with a layer of conductive material;

- ii. **a second portion made of a conductive material**, said first portion and said second portion adapted for being attached together so as to define an interior chamber for conducting signals, **said second portion defining a smaller surface area than said first portion**;
- b) **at least one resonator attached to said second portion**, and adapted for extending within the interior chamber when said first portion and said second portion are attached.

The Applicant respectfully submits that the combination of Scott et al. and Kasuga et al. fails to establish a *prima facie* case of obviousness as per §2142 of the MPEP on the basis that there is no motivation or suggestion to combine the reference teachings.

The inventiveness of the present invention lies in the fact that the filter comprises both a dielectric portion and a conductive portion, wherein (1) the conductive portion has a smaller surface area, and (2) the **at least one resonator is attached to this conductive portion that has the smaller surface area**. As described in the specification, (page 15, line 4, page 16, lines 9-11, and page 21, lines 20-22) this construction is advantageous for numerous reasons, one of which being that it provides a light weight, inexpensive filter which is able to better dissipate heat and reduce insertion losses. In addition, since 80-90% of the electric current is in the resonators and the conductive portion to which they are attached, by attaching the resonators to the portion of the housing with the smaller surface area, the remaining portion of the housing, which has the larger surface area, can be coated with a less conductive, less-expensive coating.

In order to arrive at the claimed limitation, one would have to combine the portion of Scott et al.'s dielectric housing having the larger surface area with the conductive portion of the housing of Kasuga et al. having the smaller surface area. However, Scott et al. only describes attaching resonators to the portion of its dielectric housing that has the greatest surface area. As such, one of ordinary skill in the art would not have been motivated to combine the dielectric portion of Scott et al. that has the greatest surface area with the conductive lid of Kasuga et al. that has the resonators attached thereto, since the dielectric portion of Scott et al. that has the greatest surface area already has resonators attached thereto. In order to arrive at the claimed invention, not only would

the teachings of these two references need to be combined, but the teachings of Scott et al. would also need to be modified. Therefore, the Applicant respectfully submits that one of ordinary skill in the art would not have been motivated to combine these reference teachings to arrive at the claimed invention, since the combination of these references does not even arrive at the claimed invention without further modification.

Moreover, the Applicant respectfully submits that the Examiner has not considered the teachings of the prior art, but instead is being arbitrarily selective in identifying the features of these references that are convenient in order to allegedly arrive at the claimed invention. As stated in *In re Fine*, 837F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed Cir. 1988) "One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention". This is re-stated again in *Crown Operations International Ltd v. Solutia Inc.* 289 F.3d 1367, 1376, 62 USPQ2d 1917 (Fed Cir. 2002) "determination of obviousness cannot be based on the hindsight combination of components selectively culled from the prior art to fit the parameters of the patented invention".

In view of the above, the Applicant respectfully submits that the combination of references cited by the Examiner does not satisfy a *prima facie* case of obviousness as per as per §2142 of the MPEP. Thus, the Applicant respectfully submits that independent claim 1 is in condition for allowance over the references cited by the Examiner. Accordingly, the Examiner is respectfully requested to withdraw his rejection to independent claim 1.

Claims 2-27

Claims 2-23 depend from independent claim 1, and as such incorporate by reference all the limitations contained therein. Since claim 1 is believed to be in condition for allowance, claims 2-23 are also believed to be in condition for allowance as being dependent upon an allowable base claim. Accordingly, the Examiner is respectfully requested to withdraw his rejection to dependent claims 2-23.

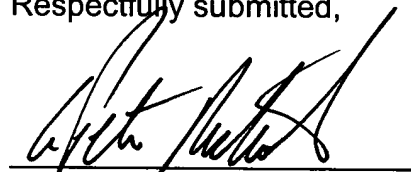
Claims 24-27 have been cancelled from the present application thereby rendering the Examiner's rejection to these claims moot.

V. CONCLUSION

In view of the above, it is respectfully submitted that claims 1-23 and 28 through 31 are in condition for allowance. Reconsideration of the rejections and objections is requested. Allowance of claims 1-23 and 28 through 31 at an early date is solicited.

If the claims of the application are not considered to be in full condition for allowance, for any reason, the Applicant respectfully requests the constructive assistance and suggestions of the Examiner in drafting one or more acceptable claims or in making constructive suggestions so that the application can be placed in allowable condition as soon as possible and without the need for further proceedings.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'G. Peter Nichols', is written over a horizontal line.

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